United States Patent [19]

O'Neill et al.

[11] **3,980,304**

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[54] **PORTABLE BATTING PRACTICE CAGE**

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[21] Appl. No.: **464,555**

[52] **U.S. Cl.** ..... **273/26 R;** 272/3; 273/26 A

[51] **Int. Cl.²** **A63B 69/40**

[58] **Field of Search** ..... 273/26 R, 55 R, 55 A, 273/33, 176 F, 101, 29 A, 26 A, 26 D; 272/3, 29; 124/7, 16

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3,802,705	4/1974	Burns et al.	273/101

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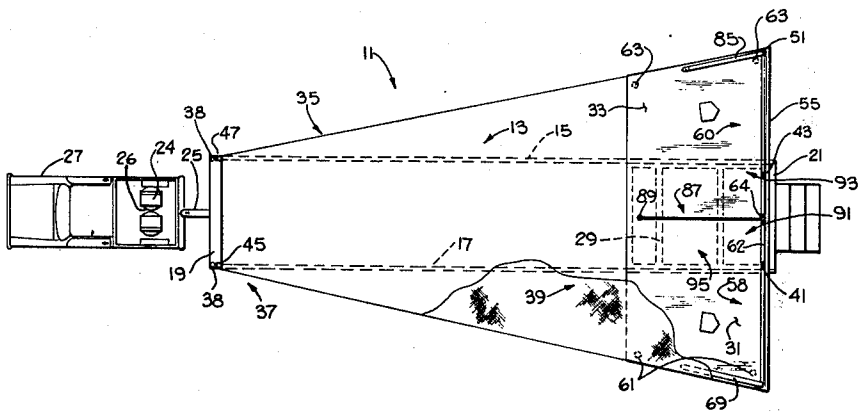
Assistant Examiner—T. Brown
Attorney, Agent, or Firm—Lindenberg, Freilich, Wasserman, Rosen & Fernandez

[57] **ABSTRACT**

A trailer adapted to be towed by a prime mover supports at least one batting platform adapted to be stood upon by baseball players, one in each of a plurality of batting areas. A plurality of pitching machine, supported by the prime mover positioned a distance from the batting areas, the prime mover being positioned to project a plurality of baseballs into the batting areas to permit hitting of the baseballs by the players. A structure including poles and cables supports a flexible material around at least the batting areas to provide an enclosure for restraining to a limited area the baseballs pitched by the machine and hit by the players. The batting areas can be transversely aligned at one end of the trailer in which case the pitching machine is positioned in proximity to the other end of the trailer. The batting areas can also be aligned along the length of the trailer in which case the pitching machine is positioned laterally of the trailer.

2 Claims, 11 Drawing Figures



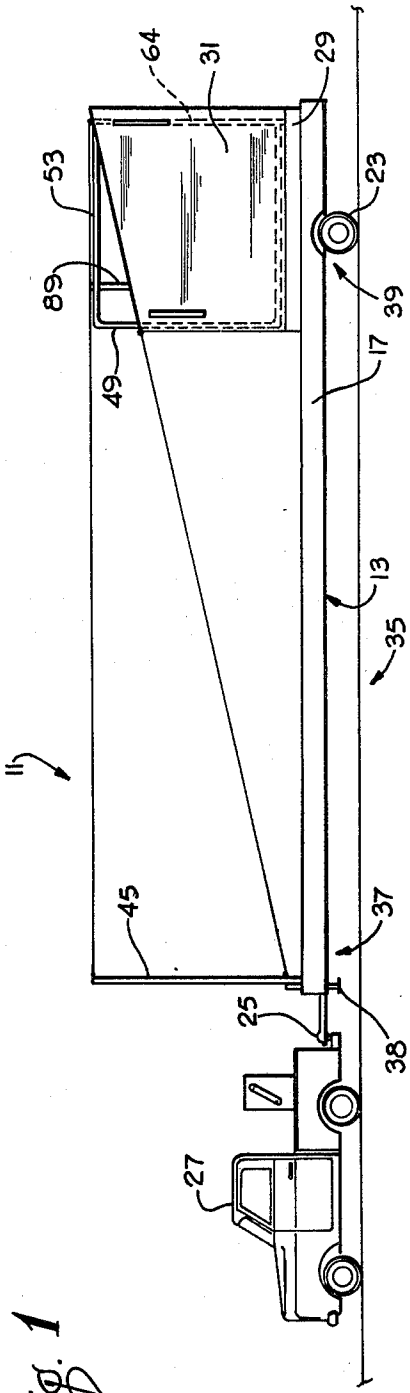


Fig. 1

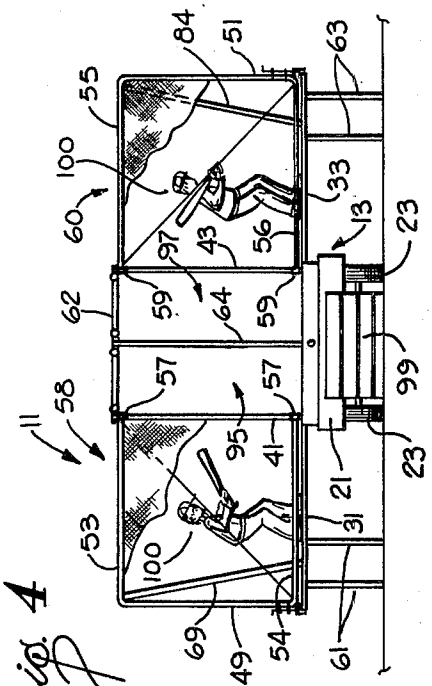


Fig. 4

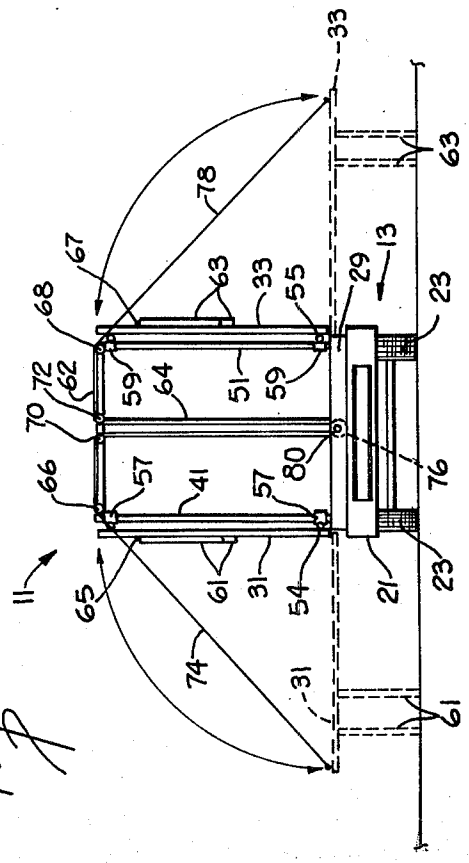


Fig. 2

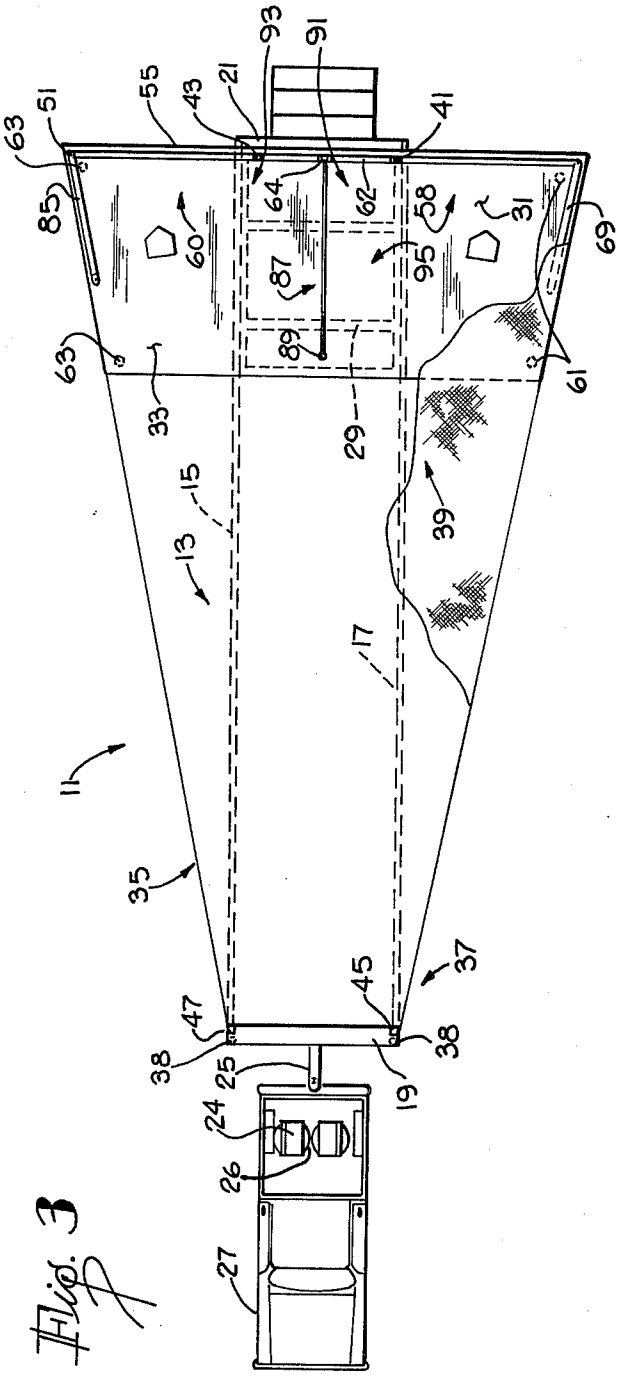


Fig. 3

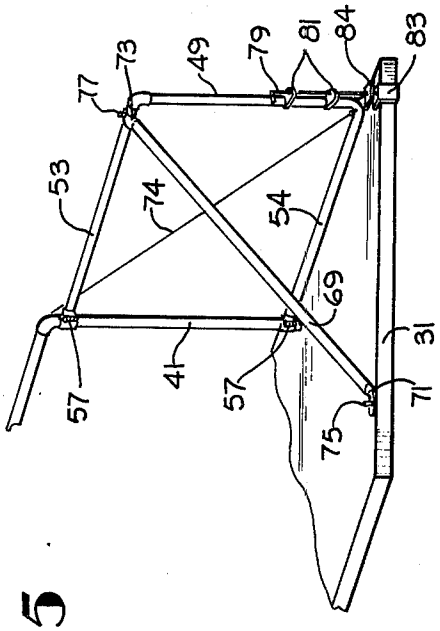


Fig. 5

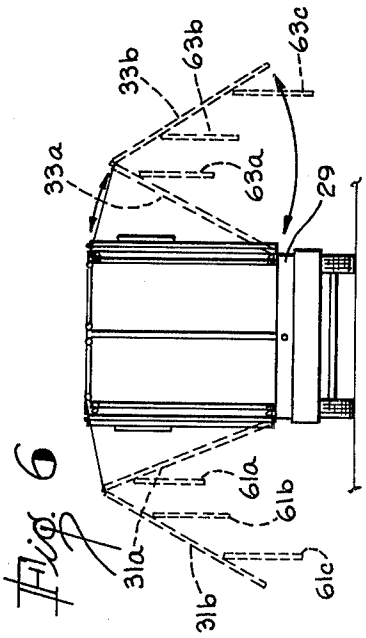


Fig. 6

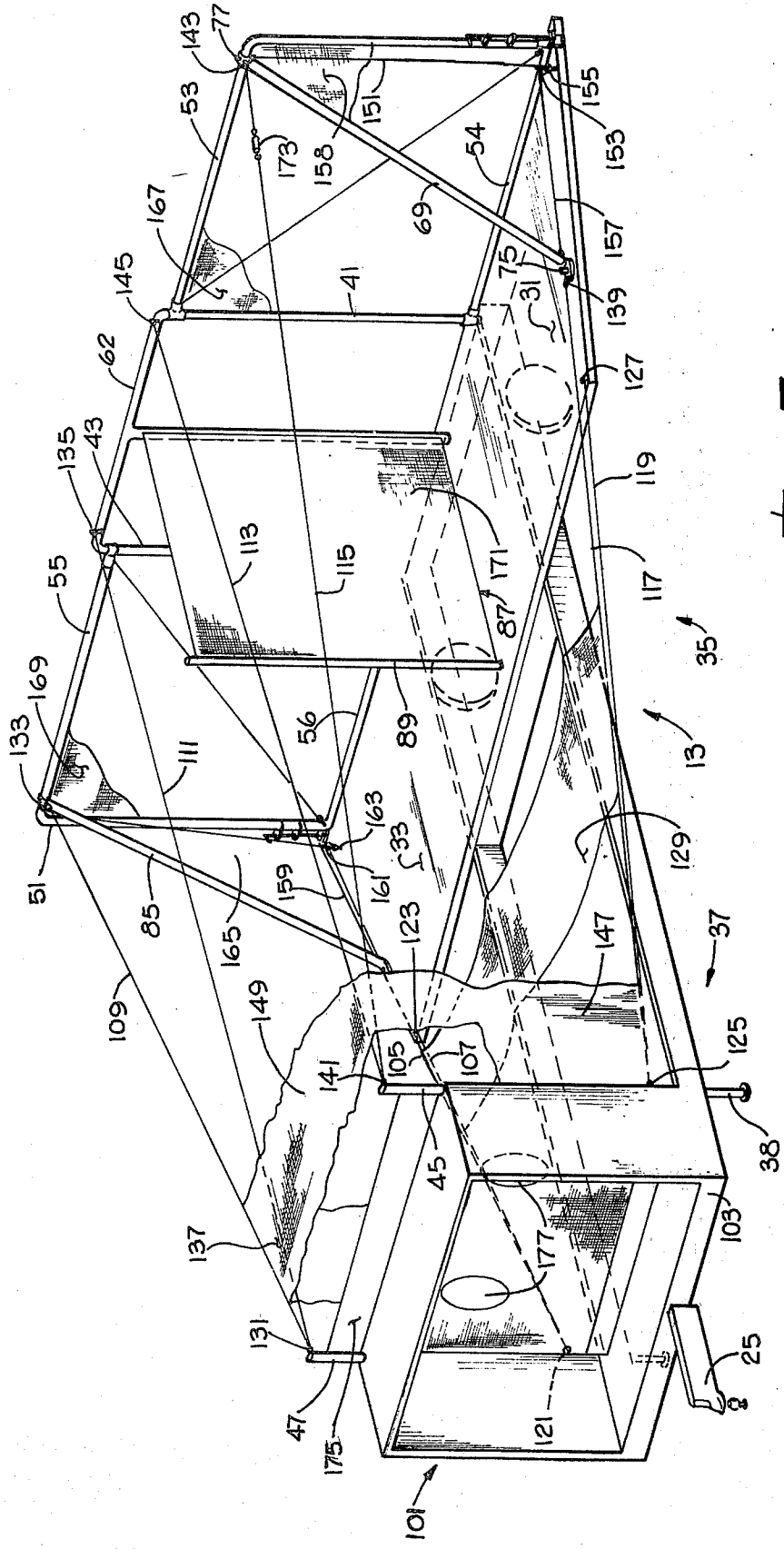

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Fig. 7

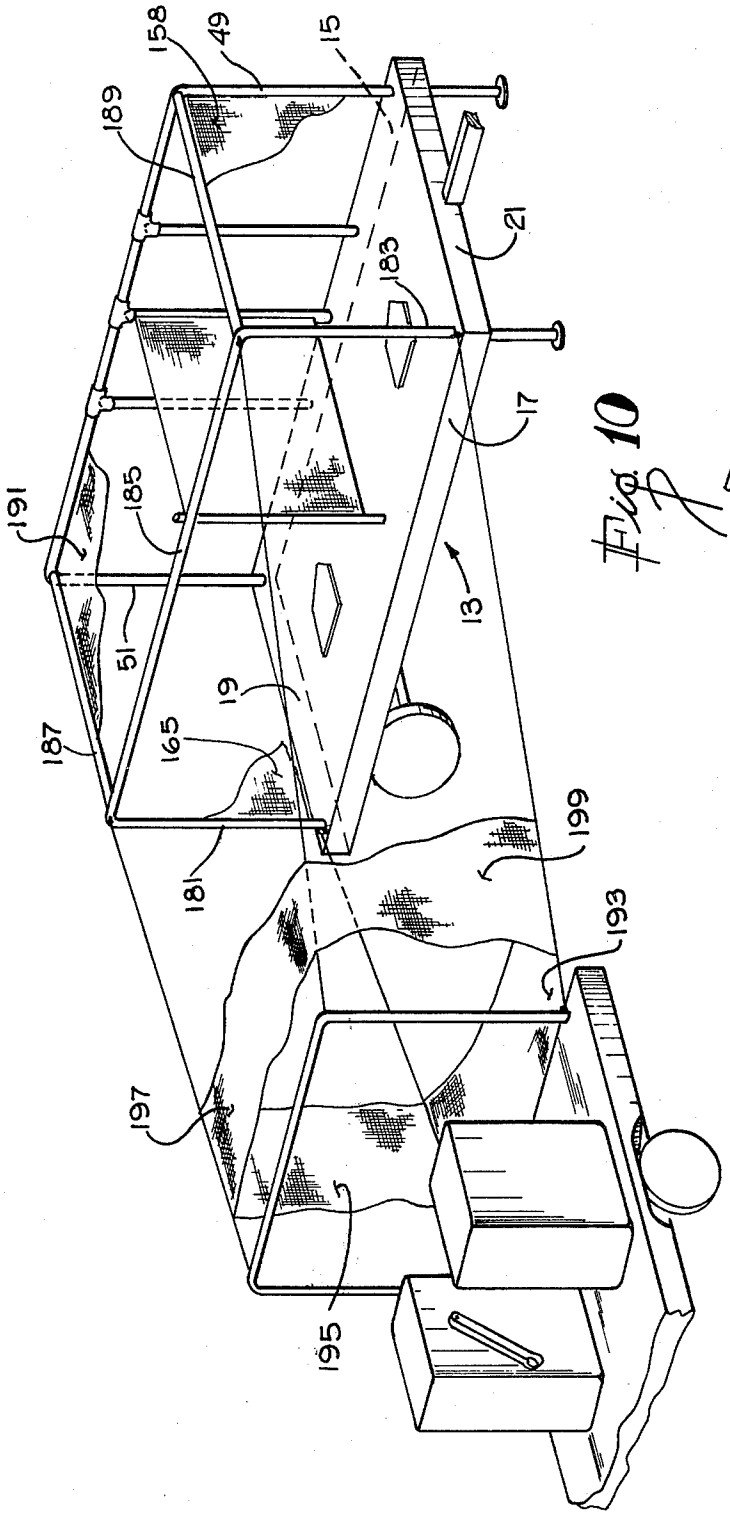
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Fig. 10

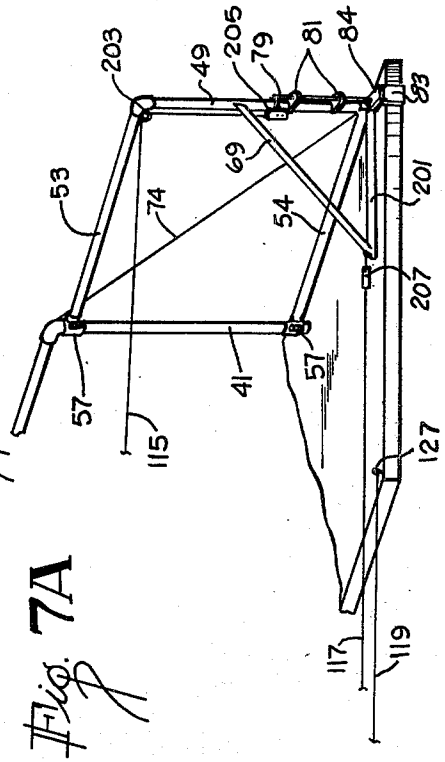
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Fig. 7A

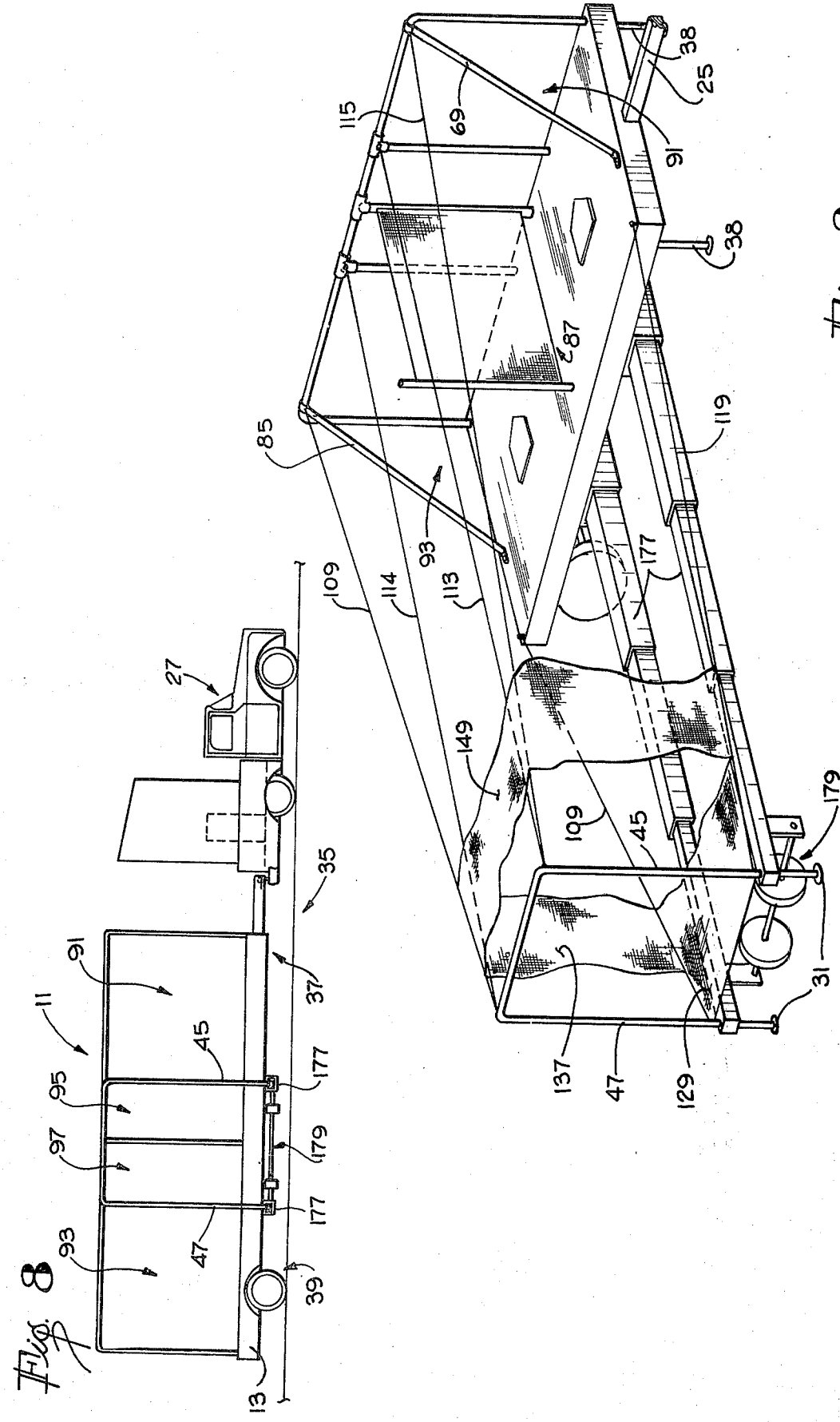
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Fig. 8

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Fig. 9

PORTABLE BATTING PRACTICE CAGE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to sporting equipment and more specifically to batting cages for use by baseball players in practicing batting skills.

2. Description of the Prior Art

One of the most worthwhile skills that can be practiced by a baseball player is his batting skill. Many hours are spent in batting practice not only by the sophisticated players associated with the professional leagues but also the players associated with the children's leagues. In the professional leagues, mechanical ball throwing machines such as that disclosed by Halstead in U.S. Pat. No. 3,724,437, are used to repeatedly and individually hurl a plurality of baseballs into proximity to the practicing batter. These machines are particularly desirable for use in batting practice since they throw the baseballs with a high degree of accuracy. Furthermore, these machines are adjustable in both height and velocity to provide excellent control over the course of the baseball.

These ball throwing machines can be used in cooperation with a batting practice cage such as that disclosed by Flaugh in U.S. Pat. No. 1,591,753. It will be noted that this batting practice cage functions much as a pair of fences having a hood supported therebetween. Although this batting practice cage is portable, there is no restriction on the travel of the baseball in the outward direction. Furthermore, the portability provided by the wheels 27 of the Flaugh cage is restricted generally to a single baseball field. It is not at all adapted for being towed by a truck on a highway between widely spaced baseball fields.

The batting cages of the past have also included ball return means such as that disclosed by Mainers in U.S. Pat. No. 3,306,613. The floor of this batting cage slopes gently from the practicing batter to a trough in proximity to the ball throwing machine. Balls on the floor of this batting cage tend to roll into the trough where they are automatically retrieved and fed into the ball throwing machine. It will be noted that this particular batting cage is not at all portable. It is therefore representative of many of the prior art batting cages which, although they perform a significantly advantageous function, are permanently located at a single position.

It can be seen from the aforementioned patents that the machinery associated with the batting cages of the prior art is particularly complex and therefore quite expensive. For this reason, it is understandable that practice batting cages of this type are normally found only in the major professional leagues.

In order to sharpen the batting skills of the baseball players in the children's leagues, one of the team members, such as a pitcher, is used to repeatedly throw baseballs into the vicinity of a practicing batter. This manner of practice is particularly tiring to the pitcher and can result in injury to his arm. Furthermore, with an understandable lack of skill on the part of the pitcher, the accuracy of the pitching leaves a great deal to be desired. A child, out of mere frustration, will develop bad habits swinging at poorly pitched balls. As a result, this form of batting practice may not be particularly beneficial.

What has been needed in some means for enabling the less sophisticated child players to benefit from the relatively expensive batting practice machinery, a means which does not require a significant initial investment but which can be paid for in small increments by each parent, for example.

SUMMARY OF THE INVENTION

In accordance with the present invention, a practice batting cage is built on a frame which is supported on wheels and provided with a trailer hitch to facilitate the transporting of the frame and batting cage by a prime mover. The frame has a generally rectangular configuration typical of large trailers which are commonly towed on the highways. The batting cage is collapsible into a relatively small size to facilitate the transportation of the cage between various baseball fields throughout a city or county. Upon arrival at a particular baseball field, the batting cage can be easily set up into an operational position in a minimal time such as only 10 minutes.

For a nominal charge, the players of a children's league team, for example, can spend time in the portable batting cage where they can benefit from the use of the relatively expensive ball throwing and ball return machinery. Of particular importance is the fact that the high cost of this machinery can be shared by many baseball teams throughout a city or county so that even the children's teams can benefit from this highly advantageous form of batting practice.

Of particular advantage to the present invention is the ease and simplicity with which the practice batting cage of the present invention can be set up into the operational position and collapsed into the transportable position. In one embodiment, a pair of batting platforms pivot on the frame laterally at one end of the trailer into an operational position wherein they provide horizontal platforms on which the practicing batters can stand. The ball return and ball throwing machinery can be positioned at the other end of the frame of the trailer to hurl the baseballs into a strike zone near the batters. A canvas and net enclosure surrounds the batting platforms and extends into proximity to the ball throwing machines to limit the travel of the throw or hit baseballs.

When the batting platforms are initially lowered into the horizontal, operational position, legs automatically swing from beneath the batting platforms to support these platforms in the horizontal position. The legs automatically maintain a vertical position so that no additional attention is needed to provide this orientation. Once the batting platforms are in place, a pair of gates can be swung into alignment along the back of the batting platforms. A single crossbar can be placed between each of the batting platforms and the associated gate to maintain these structural members in the operational position.

Cables can be strung from the compression members and batting platforms at the rear of the trailer to posts in proximity to the ball throwing machines. These cables provide a supporting structure on which the canvas and net enclosure can be installed. These cables can be automatically provided with a tension when the batting platforms, gates, and compression members are disposed in their operational positions. As a highly desirable consequence, the canvas and net which form the enclosure can be left on the cables even when the batting cage is being transported. At the next baseball

field, the batting platforms can be lowered, the gates swung out, and the compression members placed in position. All of this can be accomplished by a single person in only about 10 minutes.

In another embodiment, the batting platforms are permanently constructed in a line along the length of the trailer frame. A poriton of the frame telescopes laterally from the batting platforms to stretch the cables and associated canvas and net in order to form the enclosure. In both of these embodiments, the ball throwing machinery can be disposed either on the frame of the trailer or in the bed of the prime mover. In the latter embodiment, for example, the prime mover carrying the ball throwing machinery would be operationally positioned near the end of the telescoping extension from which position the balls would be thrown toward the batting platforms.

In still a further embodiment, the canvas and net enclosure can be formed by retractable awnings which extend laterally of the batting platforms for connection to the truck carrying the ball throwing machinery.

With any of these embodiments, the batting cage can be transported between the baseball fields in different parts of a city or county, and can be easily set up by a single person in a minimal amount of time. These portable batting cages thereby provide a relatively inexpensive and highly effective batting practice for even the baseball players on the less sophisticated teams.

These and other features and advantages of the present invention will become more apparent with a description of preferred embodiments in conjunction with the associated drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view of one embodiment of the portable batting practice cage of the present invention, the cage illustrated in a collapsed, transportable position on a trailer behind a tow truck carrying a pair of ball throwing machines;

FIG. 2 is a rear elevational view illustrating the ease with which batting platform means of the batting practice cage of FIG. 1 can be set up into an operational position;

FIG. 3 is a plan view of the embodiment of FIG. 1 illustrating the batting practice cage in the operational position with batting areas aligned transverse to the length of the trailer;

FIG. 4 is a rear elevational view illustrating the batting practice cage of FIG. 1 in the operational position with a pair of baseball players disposed in the batting areas;

FIG. 5 is a perspective view of an outside corner of one of the batting areas illustrating a portion of the structure supporting the enclosure of the batting practice cage;

FIG. 6 is a rear elevational view similar to FIG. 2 but illustrating how the batting platform means can be embodied in an accordion shape to provide multiple or enlarged batting areas;

FIG. 7 is a perspective view of a further embodiment of the invention similar to the embodiment of FIG. 1 but with the ball throwing machines mounted on the trailer;

FIG. 7A is a perspective view similar to FIG. 5 showing the outside corner of one of the batting areas in a further embodiment of the invention;

FIG. 8 is a side elevational view of a further embodiment of the batting practice cage in the transportable position wherein the batting areas are aligned along the length of the trailer and the ball throwing machines are carried on the prime mover;

FIG. 9 is a perspective view of the embodiment illustrated in FIG. 8 showing the batting practice cage set up in the operational position with the enclosure partially supported on a telescoping extension of the trailer; and

FIG. 10 is a perspective view of still a further embodiment of the batting practice cage wherein a plurality of retractable swings extend laterally of the trailer to engage the truck and form the enclosure.

DESCRIPTION OF PREFERRED EMBODIMENTS

A portable batting practice cage is illustrated in FIG. 1 and designated generally by the reference numeral **11**. The batting cage **11** can be easily collapsed into a transportable position as shown in FIG. **1**, or set up as shown in FIG. **2**, into an operational position as shown in FIGS. **3** and **4**. The batting cage **11** includes a frame **13** which can have the configuration of a rectangle, best shown in FIG. **3**. In such an embodiment the frame **13** includes a pair of longitudinal members **15** and **17** and at least a pair of transverse member **19** and **21**. The frame **13** is mounted on wheels **23** to provide the batting cage with portable characteristics. The frame **13** and wheels **23** collectively define a trailer **35** having a forward end **37** and a rearward end **39**.

A conventional trailer hitch **25** is provided at the forward end **37** of the trailer **35** to facilitate the transporting of the cage **11** by a prime mover such as the truck **27**. In the transportable position, the batting cage **11** can be confined within the dimensions of legal trailer sizes to facilitate the transporting of the batting cage **11** among various baseball fields throughout a city or county. In the illustrated embodiment, a pair of ball throwing machines **24** are individually mounted on pivotal platforms **26** on the back of the truck **27**.

In this particular embodiment, a riser **29** forms part of the frame **13** in proximity to the transverse frame member **21**. The riser **29** provides additional elevation so that the top of the riser **29** is at a height such as approximately 3½ feet above ground elevation. In this particular embodiment, a pair of batting platforms **31** and **33** are pivotally mounted on a collapsible portion of the frame **13** at the lateral edges of the riser **29**.

A first pair of stationary posts **41** and **43** can be mounted to extend upwardly on the riser **29** in proximity to the corners of the frame **13** defined at the rearward end **39** of the trailer **35**. A second pair of stationary posts **45** and **47** can be similarly mounted to extend upwardly at the corners of the frame **13** defined at the forward end **37** of the trailer **35**.

A third pair of vertical posts are designated by the reference numerals **49** and **51**. The post **49** is supported by a pair of horizontal members **53** and **54** which are pivotally attached to the vertical post **41** by a plurality of hinges **57**. Similarly, the post **51** is supported by horizontal members **55** and **56** which are pivotally attached to the vertical post **43** by a plurality of hinges **59**. Thus the post **49** and associated horizontal members **53** and **54** form a gate **58** which swings about the vertical post **41**. The post **51** and associated horizontal members **55** and **54** form a gate **60** which swings about the vertical post **43**.

The portability of the batting cage **11** is a very desirable feature of the present invention, but the ease with which the cage **11** can be set up into the operational

position is particularly advantageous. Upon arrival at a baseball field, the hitch **25** of the trailer **35** can be disconnected from the truck **27.** Then a plurality of extendable legs **38** at the forward end **37** of the trailer **35** can be lowered to contact the ground and level the trailer **35.** After the trailer **35** has been leveled, the batting platforms **31** and **33** can be pivoted from their substantially vertical, transportable position to the substantially horizontal, operational position. This pivoting step can be enhanced by a structure including a horizontal structural member **62** connected between the tops of the posts **41** and **43,** and a vertical structural member **64** connected between the horizontal members **62** and the riser **29.** A pair of pulleys **66** and **68** can be mounted on the horizontal members **62** at the tops of the respective posts **41** and **43.** Similarly, a pair of pulleys **70** and **72** can be mounted on the horizontal member **62** at the top of the vertical member **64.**

To further facilitate the lowering of the batting platform **31** into the operational positions, a cable **74** can be connected to the outermost and rearmost corner of the platform **31.** This cable **74** can be threaded through the pulley **66,** across the horizontal member **62,** through the pulley **70,** and down the vertical member **64,** for connection to an electrical winch **76** beneath the top of the riser **29.** Similarly, a cable **78** can be connected to the outermost and rearmost corner of the batting platform **33.** This cable **78** can be threaded through the pulley **68,** across the horizontal member **62,** through the pulley **72,** and down along the vertical member **64** for connection to the electrical winch **76.** A hole **80** can be provided in the back of the riser **29** to provide access to a mechanical override on the winch **76.** It can be seen that by operation of the winch **76,** the portable batting platforms **31** and **33** can be easily and safely pivoted on the riser **29** between the vertical, transportable position and the horizontal, operational position.

The simplicity of this setup procedure can be further enhanced by the provision of pairs of legs **61** and **63** which are pivotally mounted on the respective batting platforms **31** and **33** by hinges **65** and **67** respectively. If the legs **61** and **63** are pivotally mounted in this manner, they will automatically seek a vertical position beneath the associated platforms **31** and **33** to automatically support the platforms **31, 33** in the horizontal operating position. The legs **61, 63** may be of the type which are manually extendable to level the platforms **31, 33.** In this horizontal position, the batting platforms **31** and **33** provide an extension of the plane defined by the top of the riser **29.** Other methods for supporting the batting platforms **31** and **33** in the operational position will be apparent to those skilled in the art although the disclosed method offers simplicity of construction and a minimal setup time.

Once the batting platforms **31** and **33** have been lowered into their operational position, the gates **58** and **60** can be swung outwardly about the respective stationary posts **41** and **43** to dispose the associated posts **49** and **51** in their operational positions at approximately the outermost and rearmost corners of the associated batting platforms **31** and **33.** As illustrated in FIG. **5,** the gate **58** can be initially held in its operational position by a conventional lock such as the type best illustrated in FIG. **5** to include a bar **79** slidingly supported in yokes **81** attached to the post **49.** A flange **83** attached to the batting platform **31** is provided with a vertical aperture **84** which registers with the bar **79** when the post **49** is in the operational position. A similar type of lock mechanism can be used to maintain the gate **60** in its operational position with respect to the batting platform **33.**

Further support for the gate **58** and the batting platform **31** in the operational position can be provided by a structural member, such as the crossbar **69.** A pair of flanges **71** and **73** at either end of the crossbar **69** can be provided with holes to register with pins **75** and **77** on the platform **31** and the horizontal member **53** respectively. A similar crossbar **85** can be provided on the opposite side of the cage **11** to maintain the gate **60** and the batting platform **33** in their respective operational positions.

In the operational positions, the swingable posts **49** and **51** are substantially aligned with the stationary posts **41** and **43** along the rearward edge of the cage **11.** In the transportable positions, the swingable posts **49** and **51** are substantially aligned with the stationary posts **41, 45** and the posts **43, 47** respectively.

It can be seen that the maximum width of the batting platforms **31** and **33** in the operational position is limited by the maximum height of the platforms **31** and **33** in the transportable position. This maximum height is governed by vehicle regulations. Nonetheless, in this preferred embodiment, batting platforms **31** and **33** form a single planar surface with the riser **29** and this surface has a total width across the back of the batting cage **11** greater than **25** feet. In this particular embodiment, this width is separated into a pair of batting areas **91** and **93** by a verticle partition **87** which is permanently supported between a verticle post **89** and the verticle structural member **64.** Thus the post **41,** the horizontal member **62,** and the verticle member **64** form a doorway **95** into the left batting area **91.** Similarly, the post **43,** the horizontal member **62,** and the verticle member **66** form a doorway **97** into the right batting area **93.** Stairs **99** can be positioned beneath the doorways **95** and **97** to enable baseball players **100** to ascend into the batting areas **91, 93.**

Referring now to FIG. **6,** it will be noted that the width of the batting areas can be increased by providing the batting platforms **31** and **33** with an accordian construction. Thus the batting platform means can include a batting platform section **31***a* pivotally mounted to the riser **29** and a batting platform section **31***b* pivotally mounted to the outermost edge of the section **31***a.* On the opposite side of the batting cage **11,** the batting platform means can include a batting platform section **33***a* pivotally mounted to the riser **29** and a batting platform section **33***b* pivotally mounted to the outermost edge of the section **33***a.* Additional sections can be added in the accordian configuration to further increase the width of the batting platforms **31** and **33.** As illustrated in FIG. **1,** a plurality of legs **61***a,* **61***b* and **61***c* can be pivotally mounted beneath the platform sections **31***a* and **31***b* to provide support for the sections **31***a,* **31***b* in the horizontal operational position. Similarly, legs **63***a,* **63***b,* **63***c* can be pivotally mounted beneath the batting platform sections **33***a* and **33***b* on the opposite side of the cage **11.**

The embodiment of FIG. **1** can be slightly modified as shown in FIG. **7** to provide an enclosure **101** for the ball throwing machines **24** at the forward end **37** of the trailer **35.** In this embodiment, the enclosure **101** can be provided with a generally horizontal base member **103** which forms a part of the frame **13,** and the trailer

hitch 25 of the trailer 35 can be attached to this horizontal member 103.

It is particularly advantageous to provide the batting cage 11 with an enclosure surrounding the batting platforms 31 and 33 and extending into proximity to the ball throwing machines 24. Such an enclosure limits the area within which the balls thrown by the ball throwing machines 24 and the balls hit by the players 100 can travel. The enclosure of the present invention is of particular advantage since it is automatically deployed when the batting platforms 31 and 33 are lowered, the gates 58 and 60 are swung outwardly, and the crossbars 69 and 85 are positioned.

In the present embodiment, the enclosure or cage is formed by guy wires or cables which are designated with consecutively odd numerals between 105 and 119 in FIG. 7. The cable 105 can be attached to an eye 121 which is located at the bottom of the enclosure 101 substantially beneath the post 47. In the embodiment of FIG. 1, this eye 121 can be attached directly to the base of the post 47. The opposite end of the cable 105 can be attached to an eye 123 at the outermost and forwardmost corner of the batting platform 33. The cable 119, which corresponds to the cable 105 on the opposite side of the cage 11, can be similarly attached to an eye 125 at the base of the enclosure 101 beneath the post 45. The opposite end of the cable 119 can be attached to an eye 127 at the forwardmost and outermost corner of the batting platform 31. These cables 105 and 119 support a sheet of canvas, partially shown at 129, which forms the bottom of the enclosure or cage. Thus the sheet of canvas 129 which forms the bottom of the enclosure provides a ball run over which the balls are initially pitched by the machines 24 and along which the balls can be returned to the machines 24.

It is desirable that the canvas 129 slope from the cables 105 and 119 toward the center of the trailer 35, and also slope from the batting platforms 31, 33 toward the forward end 37 of the trailer 35. This will facilitate the collection of balls which fall upon the floor of the enclosure. At the forward end 37 of the trailer 35, the ball throwing machines 24 can automatically retrieve the balls from the canvas 129 to provide for continuous throwing of the balls by the machines 24.

It will be noted that with this construction, the cables 105 and 119 can remain connected to the eyes 121–127 and the canvas 129 can remain supported on the cables 105 and 119 even when the batting platforms 31 and 33 are disposed in the transportable position. Then the floor of the enclosure will be automatically formed by the canvas 129 when the batting platforms 31 and 33 are deployed to the operational position.

The cable 107 can be connected between the eye 121 and the base of the crossbar 85. It follows that the cable 107 will run substantially parallel to the cable 105. The cable 109 can be connected between an eye 131 at the top of the post 47 and an eye 133 at the top of the crossbar 85. Similarly, the cable 111 can be connected between the eye 131 and an eye 135 at the top of the post 43. A single piece of netting 137 can be connected to the cable 107, folded over the cable 109, and connected to the cable 111. Thus the netting 137 forms one of the sides and a portion of the ceiling of the enclosure.

On the opposite side of the batting cage 11, the cable 117 can be connected between the eye 125 and an eye 139 at the bottom of the crossbar 69. The cable 115 can be connected between an eye 141 at the top of the post 45 and an eye 143 at the top of the crossbar 69. Finally, the cable 113 can be connected between the eye 141 and an eye 145 at the top of the post 41. A single piece of netting, partially shown at 147, can be connected to the cable 117, folded over the cable 115 and attached to the cable 113. Thus the piece of netting 147 forms one of the sides and a portion of the ceiling of the enclosure. A rectangular piece of the canvas shown generally at 149 can be stretched between the cables 111 and 113 to form the remaining portion of the ceiling.

As previously mentioned, with reference to FIG. 5, the crossbar 69 registers with pins 75 and 77 to maintain the platform 31 and the post 49 in the operational position. With the cables 115 and 117 attached to the crossbar 69 however, there may be a tendency for the crossbar 69 to lift off the pin 77 at the top of the post 49. For this reason, a preferred embodiment includes a cable 151 attached at one end to the top of the crossbar 69 and at the other end to a hook 153. The hook 153 engages an eye 155 which is fixed to the platform 31. A cable 157 connected from the base of the crossbar 69 to the hook 53 facilitates use of a foot to register the hook 153 in the eye 155. A triangular piece of netting 158 can be stretched between the cables 151, 157 and the crossbar 69 to complete one of the sides of the enclosure.

On the opposite side of the cage 11, a cable 159 can be connected between opposite ends of the crossbar 85 to support a hook 161 which engages an eye 163 mounted on the platform 33. A triangular piece of netting 165 can be stretched between the cable 159 and the crossbar 85 to complete the opposite side of the enclosure.

At the rearward end of the enclosure, a piece of netting or canvas 167 can be stretched between the posts 41, 49 and the horizontal members 53, 54. On the opposite side of the batting cage 11, a piece of netting or canvas 169 can be stretched between the posts 43, 51, and horizontal member 55, 56. The partition 87 between the posts 89 and 64 can also be formed from a piece of netting or canvas 171.

At the forward end of the enclosure, a piece of netting or canvas 175 can be stretched between the posts 45 and 47 and over the rearward face of the enclosure 101. This piece of canvas 175 is provided with a pair of openings 177 through which the balls are initially thrown by the machines 24. The canvas 175 protects the machines 24 against balls hit by the baseball players 100 back toward the forward end 37 of the trailer 35.

The pieces of canvas 129, 167, 171, and 175 can be formed from a vinyl coated nylon such as that manufactured by Cooley, Inc. of Buena Park California, under the catalog number 3022. The pieces of netting 137, 147, 149, 158, and 165 can be formed from a nylon netting having openings approximately 1½ inch square, such as the type manufactured by The Linen Thread Co. of Blue Mountain Alabama, under the catalog number 36 Nylon. Each of the cables 105–119, 151, 157, and 159 can be provided with tensioning means such as a turnbuckle 173 illustrated in the cable 115.

It is of particular importance to note that in this embodiment of the invention, the enclosure formed by the canvas and netting is automatically deployed when the batting platforms 31, 33 are lowered, the gates 58 and 60 are swung outwardly and the crossbars 69 and 85

are positioned. There is no effort or time wasted in stringing cables or stretching canvas during the setup procedure.

The outside corner of the batting area **31**, initially discussed with reference to FIGS. **5** and **7**, can also be constructed as shown in FIG. **7A**. In this embodiment, the crossbar **69** is held in a rigid, fixed relationship with the vertical post **49** typically by welding. A structural member **201**, which replaces the cable **157** in the embodiment of FIG. **5**, can be welded between the lower end of the crossbar **69** and the lower end of the vertical post **49**. Thus the crossbar **69** and the structural member **201** actually swing with the gate **58**.

As compared to the embodiments of FIGS. **5** and **7**, the pins **75** and **77**, the flanges **71** and **73**, the hook **153**, the eye **155**, the turnbuckle **173**, and the cable **151** can be eliminated from the embodiment of FIG. **7A**. The pulley **203** can be provided near the top of the post **49** and the cable **115** can be threaded through the pulley **203** downward substantially along the post **49** to terminate at a load binder **205** fixed to the post **49**. The load binder **205** is operative between the first and second positions to tension or slack the cable **115**. A similar load binder **207** can be provided in the cable **117**.

In the operable position, the gate **58** extends along the rearward edge of the platform **31** and the crossbar **69** and structural member **201** extend along the outer edge of the platform **31**. Thus the crossbar **69** extends between the platform **31** and the vertical post **49** to maintain these members in the operable position.

When the batting cage **11** is collapsed into its transportable position, the cables **115** and **117** can be slacked by the load binders **205** and **207**, respectively, the gate lock including the bar **79** can be released, and the gate **58** pivoted to its transportable position. In this position, the horizontal members **53** and **55** extend longitudinally of the length of the trailer **35**, and the crossbar **69** and structural member **201** extend transversely to the length of the trailer **35**.

A further embodiment of the invention is illustrated in FIG. **8** wherein the batting cage **11** is shown in the transportable position behind the truck **27**. In this particular embodiment, the batting areas **91, 93** are permanently constructed in a line along the length of the trailer **35**. The doorways **95** and **97** are provided at the side of the trailer **35** and the batting areas face laterally of the trailer **35**. In this embodiment, a plurality of telescoping members **177** form a collapsible portion of the frame **13**. These telescoping members **177** can be carried beneath the longitudinal frame members **15, 17** in the transportable position, and can be telescoped laterally of the trailer **35** to support the posts **45** and **47** an extended distance from the batting areas **91, 93**. A carriage **179** connected to the telescoping members **177** can be transported in a substantially horizontal position between the telescoping members **177** as shown in FIG. **8**. This carriage **179** can be swung into a substantially vertical position to aid in supporting the telescoping members **177** a substantial distance from the batting areas **91, 93** as shown in FIG. **9**.

In this particular embodiment, the structure associated with the batting platforms **31** and **33** is permanently constructed on the frame **13** of the trailer **35**. Since the trailer **35** may be as long as eighty feet this embodiment may accommodate three or more batting areas, although just the two batting areas **91** and **93** are illustrated in FIGS. **8** and **9**.

Since the batting platforms **31** and **33** of this particular invention are permanently constructed, this embodiment may be even easier to set up than the embodiment of FIG. **1**. Upon arrival at a baseball field, the operator can swing the carriage **179** into the substantially vertical position to aid in deploying the telescoping members **177** to their extended, operational position. As in the previous embodiment, the cables **105–119** and the associated canvas and net can automatically form the enclosure with the extension of the telescoping members **177**. Since the crossbars **69** and **85** are permanently constructed in this particular embodiment, the cables **151, 157** and **159** of the previous embodiment need not be provided. Furthermore, since the batting platforms **31** and **33** are permanently constructed, the cables **74** and **78** and the associated pulleys **66, 68, 70, 72** and winch **78** also can be omitted from this embodiment.

Once the telescoping members **177** have been deployed, the trailer hitch **25** of the trailer **35** can be disconnected from the truck **27**. Then the truck **27** can be positioned near the poles **45** and **47** with the ball throwing machines **24** facing the batting areas **91** and **93**. By individually supporting the ball throwing machines **24** on the pivotal platforms **26**, the machines **24** can be individually aligned with the associated batting areas **91, 93**. It will be obvious to those skilled in the art that an enclosure, such as the enclosure **101** illustrated in FIG. **7**, could be provided near the posts **45** and **47** to support the ball throwing machines **24** on the telescoping members **177** of the frame **13**.

In still a further embodiment of the invention, the trailer **35** and structure associated with the batting platforms **31** and **33** can be constructed similar to that of the embodiment shown in FIG. **10**. In this embodiment however, a pair of vertical posts **181** and **183** can be provided to extend upwardly from the corners defined by the frame members **17, 19** and **21**. A longitudinal member **185** can be supported between the tops of the posts **181** and **183**, and a pair of transverse members **187** and **189** can be supported between the tops of the posts **51, 181** and the tops of the posts **49, 183**, respectively.

The canvas and netting associated with the batting areas **91, 93** can be constructed as previously described except that the permanent piece of netting **158** can be provided with a generally rectangular configuration to fill the entire area defined by the posts **49, 183**, the transverse member **187**, and the frame member **21**. Similarly, the permanent piece of canvas **165** can be provided with a generally rectangular configuration to fill the area defined by the posts **51, 181**, the transverse member **187**, and the frame member **19**. A permanent piece of netting partially shown at **191** can be stretched between the longitudinal members **180, 185** and the transverse members **187, 189**.

In this particular embodiment, the remaining portions of the enclosure are formed by pieces of netting **193, 195, 197** and **199** which preferably are retractable into a transportable position in close proximity to the posts **181, 183**, the longitudinal member **185**, and the frame member **17**, respectively. Thus the pieces of netting **193, 195, 197** and **199** form awnings which define the enclosure between the batting areas **91** and **93** and the ball throwing machines **24**.

It may also be desirable to mount the ball throwing machines **24**, the associated enclosure **101**, the posts **45** and **47**, and the apertured piece of canvas **175** di-

rectly on the truck **27.** Then upon arrival at a baseball field, the trailer **35** and the truck **27** can be separated and the truck **27** positioned with the ball throwing machine **24** facing the batting areas **91** and **93.** In these respective positions, the pieces of netting **193–199** can be individually extended to releasably engage the eyes **131, 141, 121,** and **125** associated with the posts **45, 47.** Upon completion of the batting practice, the retractable netting **193–199** can be individually rolled up using conventional automatic or manual awning retraction mechanisms.

The illustrated embodiments of the invention previously discussed are merely representative of the many features and advantages that can be associated with a portable batting cage. Not only is the batting cage **11** portable to facilitate its transportation among several baseball fields, but the setup time at each of the fields is minimized with the simplicity of the constructions discussed. As disclosed, the batting platforms **31** and **33** can be aligned transverse to the length of the trailer **35** at one end of the trailer **35.** In such an embodiment, the ball throwing machines **24** can either be carried at the other end of the trailer **35** or in the truck **27.** In another embodiment, the batting platforms **31** and **33** are aligned along the length of the trailer **35** and the structure associated with the batting areas **91** and **93** is permanently constructed. The telescoping frame members **177** and associated carriage **179** can be easily deployed to carry the canvas and netting into proximity to the ball throwing machines **24.** In such an embodiment the setup time may be even further reduced. In each of these embodiments, the cables, canvas and netting automatically form the enclosure when the collapsible frame members are deployed.

In perhaps a more economical embodiment, the awnings formed from the netting or canvas pieces **193, 195, 197** and **199,** can be individually extended to connect directly to the enclosure **101** and the associated posts **45** and **47** carried by the truck **27.**

Although the invention has been described with reference to these specific embodiments, it will be apparent that the concepts of the invention can be otherwise embodied so that the scope of the invention should be ascertained only with reference to the following claims.

We claim:

1. A mobile means including a prime mover, and a trailer adapted to be towed by said prime mover;

batting platform means supported by said trailer on which at least one baseball player stands;

pitching means supported on said prime mover an extended distance from said batting platform means for automatically pitching a plurality of baseballs at said batting platform means to permit hitting of said baseballs by a baseball player; and

restraining means disposed around at least the batting platform for restraining to a limited area the baseball pitched by said pitching means and a baseball hit by a baseball player standing on said platform.

2. The combination set forth in claim **1** wherein,

the trailer is longitudinal in configuration with a first end and a second end;

said batting platform means includes a plurality of batting platform sections aligned transversely to the length of the trailer at the first end of the trailer; and

said pitching means is supported by said prime mover in proximity to said second end of the trailer.

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